
सोया नट्स — विशिष्टि

Soy Nuts — Specification

ICS 67.060

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FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Dairy Foodgrains, Allied products and Other Agricultural Produce Sectional Committee had been approved by the Food and Agriculture Division Council.

In recent past, the acceptance of soy product is increasing gradually in India. Growing soybean cultivation is expected to further help enhance the same in years to come. Soybean being a good source of protein is consumed in different forms like soy flour, soy milk, tofu, soy nuts, etc. Soybean grains can be fried, roasted or enrobed to get a good quality savory snack food termed as soy-nuts and application of salt and spices enhances the taste.

Soy nuts (fried, roasted or enrobed) also have a good potential for in land use and export. This highlights the need for a standard that would benefit both the consumer and the manufacturer.

Soy nuts are prepared by soaking soybean for 2 – 3 h and then blanching in boiling water for 10 minutes or pressure cooking of unsoaked soybean/soy splits for 15 minutes followed by either deep fat frying or roasting. Roasted soy nuts can be enrobed using set of suitable ingredients and appropriate machinery.

In the formulation of this standard, due consideration has been given to the provisions of the *Food Safety and Standards Act, 2006* and the *Rules and Regulations* framed thereunder and the *Legal Metrology (Packaged Commodities) Rules, 2011*. However, this standard is subject to the restrictions imposed under these, wherever applicable.

The composition of the Committee responsible for formulation of the standard is given in Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

SOY NUTS — SPECIFICATION

1 SCOPE

This standard prescribes the requirements and the methods of sampling and test for soy nuts.

2 REFERENCES

The standards given below contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of these standards.

<i>IS No.</i>	<i>Title</i>	<i>IS No.</i>	<i>Title</i>
253 : 2014	Specification for common salt (<i>fourth revision</i>)	5402 (Part 1) : 2021/ISO 4833-1 : 2013	Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of microorganisms: Part 1 Colony count at 30 degree C by pour plate technique (<i>third revision</i>)
1070 : 1992	Regent grade water — Specification (<i>third revision</i>)	5887	Methods for detection of bacteria responsible for food poisoning
1798 : 2010	Spices and condiments — Black pepper whole and ground — Specification (<i>second revision</i>)	(Part 1) : 1976	Isolation, identification and enumeration of <i>Escherichia coli</i> (<i>first revision</i>)
1908 : 2008	Spices and condiments — Ginger whole and ground — Specification (<i>third revision</i>)	(Part 3) : 1999/ISO 6579 : 1993	General guidance on methods for the detection of <i>Salmonella</i> (<i>second revision</i>)
2443 : 2008	Spices and condiments — Coriander whole and ground — Specification (<i>third revision</i>)	(Part 7) : 1999	General guidance on methods for isolation and identification of <i>Shigella</i>
2491 : 2013	Food hygiene — General principles — Code of practice (<i>third revision</i>)	7219 : 1973	Method for determination of protein in foods and feeds
4404 : 2010	Spices and condiments — Cloves whole and ground — Specification (<i>third revision</i>)	7837 : 2013	Edible full-fat soya flour (<i>first revision</i>)
4684 : 1975	Edible groundnut flour (expeller pressed) — Specification (<i>first revision</i>)	13242 : 2018	Raw mango (<i>Mangifera Indica</i> Linn) powder (<i>Amchur</i>) and Slices — Specification (<i>first revision</i>)
5401 (Part 1) : 2012/ISO 4832 : 2006	Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of coliforms: Part 1 Colony count technique (<i>second revision</i>)	14818 : 2017/ISO 24333 : 2009	Cereal and cereal products — Sampling (<i>first revision</i>)

3 REQUIREMENTS

3.1 Description

Soy nuts shall be prepared from clean, sound and mature whole or dehulled and split soybean either by roasting/frying. Enrobing can be done for soy nuts in both the categories (roasted, fried). The nuts may be left whole or split and the final product may be treated optionally with a small amount of fat, salt, spices, etc. The product shall have uniform colour and luster, and shall be free from objectionable odour, flavour and taste. The product shall be free from foreign matter, rancid taste, insects, insect residues, rodent hair and excreta and fungal growth.

NOTE — Roasting effect can also be achieved by microwave heating of pre-conditioned whole soybean/dehulled soy splits. Pre-cooking of soybean is useful in getting soy nuts with crispy texture (low hardness).

3.2 The broken kernels in any package shall not be more than 5 percent by mass.

3.3 The product shall be manufactured under hygienic conditions (*see* IS 2491).

3.5 In addition to the above, the product shall also comply with the requirements given in Table 1.

4 ESSENTIAL INGREDIENTS

4.1 The basic ingredients used in the preparation of soy butter are whole soybean, salt and vegetable oil.

4.1.1 The soybean grains selected for the preparation of soy nuts shall be clean and free from insect and fungus infestation, rodent hair, non-edible seeds and other extraneous matter.

4.1.2 *Edible Common Salt* (*see* IS 253).

4.1.3 Oil

Refined vegetable oils, edible hydrogenated vegetable oils, or *ghee* singly or in combination. Oils with high level of unsaturated fatty acids may be preferred. The oil used for soy nuts preparation shall be of edible grade and comply with the relevant *Food Safety and Standards Regulations*.

5 OPTIONAL INGREDIENTS

5.1 In addition to the essential ingredients specified above, any of the following ingredients generally in powdered form, may be added for variation in taste:

- a) Black pepper (*see* IS 1798);
- b) Red/green chilli;
- c) Black salt (*Kala Namak*);
- d) *Amchur* (raw, dried mango) (*see* IS 13242);
- e) Coriander (*see* IS 2443);
- f) Clove (*see* IS 4404);
- g) Ginger (*see* IS 1908); and
- h) Other spices as per need.

5.2 Enrobing

It is done to get sweet, salty or spicy taste to the products. It may have a set of enrobing ingredients as:

- a) sugar, chocolate and edible confectionary raw materials suitable for enrobing; and
- b) Bengal gram or any edible cereal or food legume flour ideally suited for enrobing.

6 PACKING AND MARKING

6.1 Packing

The material shall be packed in flexible, food grade, pouches or in suitable sealed containers.

6.2 Marking

6.2.1 The containers shall legibly and indelibly bear the following information:

- a) Name of the product, that is, 'soy nuts';
- b) Name and address of the manufacturer;
- c) Brand name, if any;
- d) Batch or code number;
- e) Date of manufacturing;
- f) Best before from the date of manufacturing or packing;
- g) Net quantity;
- h) List of ingredients in descending order of proportion;
- j) Country of origin;
- k) Instructions for use;
- m) Directions for storage;
- n) Indicator for vegetarian product that is, green circle in a square; and
- p) Any other information required under the *Legal Metrology (Packaged Commodities) Rules, 2011* and the *Food Safety and Standards (Packaging and Labelling) Regulations, 2011*.

6.2.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark.

7 SAMPLING

Representative samples of the material shall be drawn and tested for conformity to this standard as prescribed in IS 14818.

8 TESTS

8.1 Tests shall be carried out as prescribed in col 4 of Table 1.

8.2 Quality of Reagents

Unless specified otherwise, pure chemicals shall be employed in tests and distilled water (*see* IS 1070) shall be used where the use of water as reagent is intended.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the test results.

Table 1 Requirements for Soy Nuts
(*Clauses 3.5*)

SI No.	Characteristic	Requirement	Method of Test, Ref to
(1)	(2)	(3)	(4)
i)	Moisture, percent by mass, <i>Max</i>	9.0	Appendix B of IS 4684
ii)	Fat (on dry basis), percent by mass, <i>Min</i>		Appendix F of IS 4684
	a) Roasted	14.0	
	b) Fried	25.0	
	c) Roasted and enrobed	12.0	
	d) Fried and enrobed	23.0	
iii)	Acid value of extracted fat, <i>Max</i>	1.0	Appendix G of IS 4684
iv)	Aflatoxin, µg/kg, <i>Max</i>	30	Appendix J of IS 4684
v)	Urease activity	Change in pH not more than 0.5	IS 7837
vi)	Protein (on dry basis), percent by mass, <i>Min</i>		IS 7219
	a) Roasted	35.0	
	b) Fried	30.0	
	c) Roasted and enrobed	25.0	
	d) Fried and enrobed	22.0	
vii)	Total bacterial count, per g, <i>Max</i>	50 000	IS 5402 (Part 1)
viii)	Coliform count, per g, <i>Max</i>	10	IS 5401 (Part 1)
ix)	<i>Salmonella</i> , per 25 g	Absent	IS 5887 (Part 3)
x)	<i>Shigella</i> , per 25 g	Absent	IS 5887 (Part 7)
xi)	<i>Escherichia coli</i> , per g	Absent	IS 5887 (Part 1)

ANNEX A*(Foreword)***COMMITTEE COMPOSITION**

Foodgrains, Allied Products and Other Agricultural Produce Sectional Committee, FAD 16

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